

# MAINTAINING A WATCHFUL EYE: GEIS EARNS ACCOLADES FOR H1N1 EFFORTS

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On April 16, 2009, the U.S. Centers for Disease Control and Prevention (CDC) notified the San Diego County Health and Human Services Agency that one of its residents, a 10-year-old boy, had tested positive for a dangerous strain of influenza known as H1N1. At approximately the same time, a nine-year-old female from Brawley, California also tested positive for H1N1. Meanwhile in Texas, two other cases of this unusual strain of flu were discovered and reported.

The common thread that binds these four cases of the H1N1 pandemic is the Department of Defense (DoD). The California cases were detected thanks to the surveillance efforts of the Naval Health Research Center (NHRC) in San Diego, California. The Texas cases were discovered as a result of the surveillance efforts undertaken by the United States Air Force School of Aerospace Medicine (USAFSAM) in Brooks City-Base, Texas.

In a sense, it should come as no surprise that DoD had a hand in identifying these first cases of H1N1 in the United States. For the past 13 years, DoD has been tracking the emergence of influenza viruses and other diseases through its massive infectious disease surveillance system.

“Because any infectious disease can have a significant impact on DoD’s ability to conduct its mission, ongoing infectious disease surveillance is necessary,” said Col. Wayne P. Hachey, DO, MPH, director of Preventive Medicine and Surveillance for the Office for the Assistant Secretary of Defense (Health Affairs), Force Health Protection and Readiness.

At the center of this effort is the Global Emerging Infections Surveillance and Response System (GEIS), an alliance of agencies, services, commands, experts, and individuals working together to track, isolate, and combat diseases which can hinder the effectiveness of American forces around the world. GEIS became a division of the Armed Forces Health Surveillance Center (AFHSC), as directed by DoD memo, in February 2008. Located in Silver Spring, MD, this expanded organization now combines the robust assets of both the Defense Medical Surveillance System with laboratory surveillance assets managed by GEIS. USAFSAM and the NHRC represent the Air Force and Naval CONUS hubs of GEIS respectively.

Globally, in 2008, the GEIS network conducted emerging infection surveillance and response activities with

39 partners in 111 countries. Activities at these many locations were varied and included emerging infectious disease (EID) surveillance, technology transfer and infrastructure improvement initiatives, training exercises, and assessment and communication. These sites work together to ensure DoD is prepared to prevent, survey, and respond to emerging influenza strains that may pose a threat to military personnel and their families, reduce medical force readiness, and present a risk to U.S. national security.

This comprehensive global presence places DoD in the unique position to both detect emerging infectious disease, and serve as an effective platform to support U.S. efforts to respond to an international pandemic. In the case of the H1N1 pandemic, this system has made DoD an indispensable member of a worldwide team dedicated to fighting this or any other emerging infectious diseases which could pose a threat to world health.

## THE TEAM CONCEPT

Although the first priority for the DoD is to preserve the ability of the U.S. Armed Forces and civilians to defend the nation and sustain current military operations, it also plays a vital role in

the National Strategy for Pandemic Influenza Implementation Plan. DoD is directly involved in roughly one-third of the more than 300 critical actions outlined by the Federal government to combat any pandemic.

DoD continues to work closely with those Federal agencies charged with leading the U.S. Government’s Pandemic efforts. These include the lead agency for H1N1 preparedness, the Department of Health and Human Services, as well as the Department of Homeland Security, and the Department of State. In addition, DoD’s worldwide surveillance assets remain on full alert to monitor the spread and detect changes in virulence of this virus, working in close cooperation with the CDC and the World Health Organization (WHO) in analyzing potential cases.

GEIS has earned significant praise from the medical and academic community for its efforts in identifying and fighting H1N1 and other emerging infectious diseases. In July 2009, the American Journal of Preventive Medicine issued an official bulletin praising the GEIS system, referencing it as a “little known national jewel that has repeatedly made notable contributions to global influenza control through close collaboration with CDC, the Food and Drug Administration

(FDA), the WHO, and many other partners.”

The Institute of Medicine, part of the National Academy of Sciences, also issued the following statement: “The Global Emerging Infections System, through its avian influenza/pandemic influenza activities at DoD overseas laboratories and headquarters, has contributed greatly to the development of laboratory and communications infrastructures within partner countries. Beneficial effects can be seen from current GEIS efforts in 56 countries to assist its public health partners in building capacity through training and support of laboratory and communications infrastructures.”

Dr. Patrick W. Kelley, MD, DrPH, of the Institute of Medicine said, “The somewhat unexpected emergence of novel H1N1 in Mexico, rather than in the anticipated Asian setting, highlights a lesson learned about the need for comprehensive global influenza surveillance. This is a lesson geographically diverse foreign military health systems may be well-positioned to help address...the success of the U.S. DoD system...suggest global influenza surveillance and response could be more comprehensive and informative if other military organizations took advantage...

to emulate, extend, and institutionalize the U.S. DoD approach.”

In addition to its laboratory and syndromic surveillance efforts, DoD has proactively communicated influenza information to its Service members, their families, and other constituent groups utilizing a series of measures. One such measure includes the Pandemic Influenza Watchboard, upon which periodic updates and disease information are immediately placed upon receipt.

Lt. Col. Hachey also drafted a popular blog posted to Health.mil, the general Military Health System website, offering comforting and easy to understand tips for identifying and preventing H1N1 and its spread. In addition, DoD has utilized social media outlets, such as Facebook and Twitter, in an effort to educate and inform Service members and their families.

The H1N1 Influenza virus remains a dangerously potent disease which could conceivably mutate into a more lethal form. The AFHSC/GEIS has the resources, people, and experience to ensure the U.S. military and its constituents have the information they need to fight and defeat these enemies unseen to the naked eye.